

# COMSEARCH

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

July 2, 1992

**Ms. Donna R. Searcy**  
**Secretary**  
**Federal Communications Commission**  
**1919 M Street, NW**  
**Washington, D.C. 20554**

ORIGINAL  
FILE


**RE: In the Matter of Amendment of Parts 2, 21, 25, and 94 of the Commissions Rules to Accommodate Common Carrier and Private OP Fixed Microwave Systems in Bands above 3 GHz, Petition for Rulemaking RM-8004.**

**Dear Secretary Searcy:**

**Enclosed herewith is one (1) original, and 5 (five) copies of our response to the Alcatel Network Systems Petition for Rulemaking RM-8004.**

**Sincerely,**

**COMSEARCH**

  
**Christopher R. Hardy**  
**Manager**  
**Transmission Planning Services**

**CRH:msm**

**Enclosures**

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Before the  
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Washington, D.C. 20554

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In the Matter of

Amendment of Parts 2, 21, 25 and 94  
of the Commission's Rules to  
Accommodate Common Carrier  
and Private Op-Fixed Microwave  
Systems in Bands Above 3 GHz

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RM- 8004

To: The Commission

COMMENTS OF COMSEARCH

On May 22, 1992, Alcatel Network Systems, Inc. (ANS) filed a Petition for Rulemaking (Petition) with the Commission to amend Parts 2, 21, 25, and 94 of the Rules to accommodate common carrier and private microwave systems in the bands above 3 GHz. Comsearch, hereby respectfully submits these comments in response to the above captioned Petition.

Comsearch has been coordinating frequencies and engineering microwave paths, earth stations and mobile systems for over 15 years. In this regard, we have had extensive interaction with industry groups, such as the NSMA and TIA to develop industry standards regarding frequency coordination and engineering of telecommunications systems. Our experience in both the Operational Fixed (OF) and Common Carrier (CC) microwave bands makes us uniquely qualified to comment on the ANS Petition.

Section III of the Petition was previously addressed in Comsearch's reply to the Commission's Notice of Proposal Rulemaking, ET Docket No. 92-9 ("92-9"), therefore we will direct our comments herein to Section IV and attachment I of the Petition regarding proposed rules for frequency allocation.

Comsearch applauds ANS's efforts at formulating specific technical and operational rules to facilitate the movement of displaced 2 GHz users. As stated in our previous response to 92-9 we encouraged the Commission to dissolve entirely the distinction between OF and CC for the purpose of band allocation and to initiate a rechannelization of fixed microwave bands above 3 GHz to support narrowband and wideband operation. We also pointed out the need to address within the industry the prompt development of associated interference criteria and coordination procedures. ANS' proposal addresses each of these issues.

#### ANS Channelization Plan

ANS' Petition covers a number of issues left unresolved by the Commission's proposal of a "blanket" waiver in 92-9. The proposal addresses spectral efficiency and shows a sensitivity to displaced users needs through the subdivision and rechannelization of existing frequency plans. While it succeeds at establishing sufficient spectrum for the displaced users to occupy, it does not adequately address the impact on incumbent users in the bands to be rechannelized. For example, the ANS Proposal appears to

overlook that a significant number of users in the 4, 6 and 11 GHz Common Carrier bands employ analog FM and video systems.<sup>1</sup> In addition, many of the OF users in the private 6 GHz band employ analog modulation. The introduction of new overlapping channel plans into this analog environment will result in a variety of new potential interference conflicts based on the many possible frequency offsets involved. While current analysis techniques are generally applicable for any frequency offset for digital victim receivers, the same cannot be said for analog victim receivers. We feel confident that through proper planning and development of industry interference objectives and standards, techniques can be developed to analyze the interference potential between the incumbent and migrating users' systems. However, additional study is warranted to determine the full effect of introducing new channel plans into the existing environment.

Also, the ANS Petition proposes making spectrum available for displaced 2 GHz users in portions of the 4 GHz band by reducing earth station operators to secondary status. Clearly, this proposal will be unpopular with earth station operators, and whether or not they can continue to provide service with reduced

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<sup>1</sup> A search of the Comsearch database for proposed, applied for and licensed frequencies revealed that in the 4 GHz CC band there were approximately 39,411 analog FM frequencies and 1,754 video frequencies. In the 6 GHz CC band there were 18,650 analog FM frequencies and 6,287 video frequencies and in the 11 GHz CC band 3,956 analog FM and 5,585 video frequencies. Note that the counts may include frequencies which are in the process of being decommissioned, but for which deletion notification has not appeared on FCC Public Notice.

spectrum will have to be the subject of further study. The Commission should recognize, however, that given the current difficulty of coordinating shared usage of spectrum with earth station operators (as outlined in the ANS Petition), the 4 GHz band is generally not a viable substitute for the reallocated 2 GHz spectrum. This is especially true for narrowband users where the time and expense of coordinating 4 GHz frequency usage is highly impractical. Another area which appears to have been overlooked is the operation of the international KU band earth stations in the Common Carrier 11 GHz band. While the number of earth stations operating in this band are significantly lower than at 4 GHz, a similar interference situation exists and needs to be addressed.

In regards to the co-primary sharing of spectrum, we support the notion that prior coordination (as defined in 47 C.F.R. §'s 21.100 & 21.706) should be required for all bands. This method of information dissemination has proven very effective in identifying and resolving potential interference conflicts prior to filing FCC applications. It is a bilateral arrangement which places the burden of identifying and correcting problems on the users instead of the Commission.

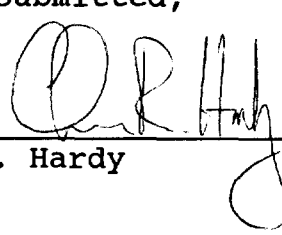
#### Proposed Rule Changes

In concept, Comsearch supports ANS' proposed rule changes regarding frequencies, antenna standards, minimum system loading, emission and bandwidth limitations, limitation on path lengths and channel

loading, power limitation, and the use of automatic transmit power control (ATPC). We would like to see the inclusion of antenna standards for the 10.7 to 11.7 GHz band which were inadvertently dropped from previous FCC rule changes.

In summary, we feel that the ANS Petition addresses many of the unresolved issues of 92-9. Through proposed rule changes and the establishment of frequency plans in the CC and OF bands to accommodate narrowband and wideband use, ANS has paved the way for a successful migration of potentially displaced 2 GHz users. With additional discussion and resolution of the concerns mentioned herein, we feel the petition has sufficient merit to warrant its introduction as a Notice of Proposed Rulemaking. Due to the magnitude and complexity of the issues contained in the Petition insufficient time was available to fully and adequately examine the technical ramifications of the proposal. Furthering of this proceeding would allow for additional study of the complex issues involved.

Respectfully Submitted,  
COMSEARCH

Prepared By:   
Christopher R. Hardy

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